

Application No.: 09/990,262**Docket No.: 2038-280****AMENDMENTS TO THE SPECIFICATION:**

Please amend the paragraph on page 1, beginning at line 4 as follows:

This invention relates to disposable undergarments for absorption and containment of excretion and more particularly, to ~~[[a]]~~ disposable undergarments such as diapers, training pants, incontinence pants or the like.

Please amend the paragraph on page 1, beginning at line 8 as follows:

Japanese Patent Application Publication No. 1996-24291A describes a disposable pull-on diaper comprising a liquid-pervious topsheet, a liquid-impervious backsheet and a liquid-absorbent core disposed between these two sheets so as to configure a front waist region, a rear waist region and a crotch region extending between these two waist regions. The front and rear waist regions are connected to each other along transversely opposite side edge ~~portion~~ portions of these front and rear waist regions to define a waist-opening and a pair of leg-openings.

Please amend the paragraph on page 3, beginning at line 2 as follows:

However, desired contraction of the first and second elastic members in the middle portions thereof may be obstructed by the core having a stiffness higher than the top- and backsheets. Insufficient contraction of the middle portions makes it difficult to press a zone of the core against the wearer's skin since a good fit of the core to the wearer's skin relies on the contraction of the middle portions. Certainly it will be possible for the known diaper to press a middle zone of the core against the wearer's skin since the respective middle portions of the first and second elastic members extend across the longitudinally middle zone of the crotch region even if the contraction of the respective middle portions ~~[[are]]~~ is insufficient. However, it is impossible for the known diaper to press the front and rear end zones of the core against the wearer's skin.

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Please amend the paragraph on page 4, beginning at line 2 as follows:

According to this invention, there is provided a disposable undergarment comprising a liquid-pervious topsheet, a liquid-impervious backsheet and a liquid-absorbent core disposed between these two sheets so as to configure a front waist region, a rear waist region and a crotch region extending between these two waist regions. The crotch region is formed along parts of both side edge portions ~~there-of~~ thereof with transversely opposite side edge portions curving inward ~~transverse by~~ transversely of the diaper and ~~defining~~ defines peripheral edge portions of leg-openings. The undergarments are ~~[[and]]~~ provided with a stretchable first elastic member attached under tension thereto so as to extend in a circular arc from a vicinity of front ends of the transversely opposite side edge portions toward a longitudinally middle zone of the crotch region. A stretchable second elastic member is attached under tension thereto so as to extend in a circular arc from a vicinity of rear ends of the transversely opposite side edge portions toward the longitudinally middle zone of the crotch region.

Please amend the paragraph on page 4, beginning at line 21 as follows:

The undergarment further comprises ~~[[in]]~~ the core being placed substantially in the crotch region and including a middle zone extending in the longitudinally middle zone of the crotch region, a front end zone extending from the middle zone toward the front waist region and a rear end zone extending from the middle zone toward the rear waist region. The first elastic member includes first ~~[[both]]~~ side portions extending in the vicinity of the front ends of the transversely opposite side edge portions and a first middle portion and ~~the~~ first middle portion extending, on ~~[[a]]the side~~ ~~[[of]]facing~~ the backsheet, across the front end zone of the core. The second elastic member includes second ~~[[both]]~~ side portions extending in the vicinity of the rear ends of the transversely opposite side edge portions and a second middle portion extending, on the side ~~[[of]]facing~~ the backsheet, across the rear end zone of the core.

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Please amend the paragraph on page 6, beginning at line 2 as follows:

Fig. 1 is a partially cutaway plan view showing a diaper ~~[[as]]~~ before it is shaped ~~[[in]]~~ into ~~pants-type pants~~;

Please amend the paragraph on page 6, beginning at line 4 as follows:

Fig. 2 is a partially cutaway plan view showing the diaper shaped from the state of Fig. 1 into ~~pants-type pants~~;

Please amend the paragraph on page 6, beginning at line 7 as follows:

Fig. 3 is a sectional view taken along a line ~~[[A - A]]~~ III - III in Fig. 1 with a middle zone of an absorbent core eliminated;

Please amend the paragraph on page 6, beginning at line 12 as follows:

Fig. 5 is a perspective view showing the diaper with front and rear waist regions connected together ~~to be ready~~ for wearing;

Please amend the paragraph on page 6, beginning at line 15 as follows:

Fig. 6 is a sectional view taken along a line ~~[[B - B]]~~ VI - VI in Fig. 4 with the middle zone of the core eliminated; ~~[[and]]~~

Please amend the paragraph on page 6, beginning at line 17 as follows:

Fig. 7 is a sectional view taken along a line ~~[[C - C]]~~ VII - VII in Fig. 4~~[[.]]; and~~

On page 6 before line 20, please insert the following new paragraph:

Fig. 8 is a view schematically showing the stiffness of the core in various regions thereof.

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Please amend the paragraph on page 7, beginning at line 2 as follows:

Fig. 1 is a partially cutaway plan view showing a diaper 1A before it is shaped ~~[[in]]into pants-type pants~~, Fig. 2 is a partially cutaway perspective view showing the diaper 1A having been shaped ~~[[in]]into pants-type pants~~ from the state of Fig. 1 and Fig. 3 is a sectional view taken along a line ~~[[A - A]]III - III~~ in Fig. 1. In Fig. 1, a transverse direction is indicated by an arrow X and a longitudinal direction is indicated by an arrow Y. In Fig. 2, a waist-surrounding direction is indicated by an arrow X and a leg-surrounding direction is indicated by an arrow Y. Surfaces of the top- and backsheets 2, 3 facing an absorbent core 4 will be referred to herein as inner surfaces thereof and surfaces of these sheets 2, 3 not facing the absorbent core 4 will be referred to herein as outer surfaces thereof.

Please amend the paragraph on page 9, beginning at line 13 as follows:

~~[[Of]]~~Regarding the core 4, the front and rear end zones 4a, 4c have stiffness (S_a and S_c , respectively) lower than that of the middle zone 4b (S_b , as can be seen in Fig. 8). To ensure that the front and rear end zones 4a, 4c have such stiffness lower than that of the middle zone 4b, for example, the basis weight of the core 4 in the front and rear end zones 4a, 4c may be adjusted to be lower than that of the core 4 in the middle zone 4b, provided that the thicknesses ~~thickness~~ of the core 4 in all the zones 4a, 4b and 4c are uniform. That is, the density of the core 4 in the front and rear end zones 4a, 4c may be adjusted to be lower than that of the core 4 in the middle zone 4b.

Please amend the paragraph on page 11, beginning at line 19 as follows:

As shown in Fig. 2, the front and rear waist regions 20, 22 are joined to each other along transversely opposite side edge portions 6, 7 of the waist regions 20, 22 by means of joining zones 14 arranged intermittently in the longitudinal direction to shape the diaper 1A ~~[[in]]into pants-type pants~~. A waist-opening 15 and a pair of leg-openings 16 are defined as the diaper 1A is shaped ~~in pants-type~~ in this manner. ~~[[Of]]~~With regard to the diaper 1A, the longitudinally opposite end portions 5 define a peripheral edge portion of the waist-opening 15 and the transversely opposite

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side edge portions 8 define peripheral edge portions of the respective leg-openings 16.

Please amend the paragraph on page 12, beginning at line 8 as follows:

~~The both~~ Both side portions 9a, 10a of the first and second elastic members 9, 10 and the third elastic member 11 extend in a leg-surrounding direction along the peripheral edge portions of the leg-openings 16. The elastic member 12 associated with the waist-opening extends in a waist-surrounding direction along the peripheral edge portion of the waist-opening 15. The auxiliary elastic member 13 extends in the waist-surrounding direction across the front and rear waist regions 20, 22. In the diaper 1A, a plurality of gathers are formed along the peripheral edge portions of the waist- and leg-openings 15, 16 as well as in the front and rear waist regions 20, 22 as the elastic members 9, 10, 11, 12, 13 contract.

Please amend the paragraph on page 12, beginning at line 21 as follows:

Fig. 4 is a partially cutaway plan view showing an open-type diaper 1B, Fig. 5 is a partially cutaway perspective view showing the diaper 1B with the front and rear waist regions 20, 22 connected to each other to be ready for wearing, and Figs. 6 and 7 are sectional views taken along lines ~~B—B and C—C~~ VI—VI and VII—VII, respectively, and in Figure 6 with [[as]] the middle zone 4b of the core 4 being eliminated. In Fig. 4, a transverse direction is indicated by an arrow X and a longitudinal direction is indicated by an arrow Y. In Fig. 5, the waist-surrounding direction is indicated by an arrow X and the leg-surrounding direction is indicated by an arrow Y.

Please amend the paragraph on page 13, beginning at line 20 as follows:

The core 4 is placed in the crotch region 21 and comprises front and rear end zones 4a, 4c and a middle zone 4b. The front and rear end zones 4a, 4c of the core 4 have a stiffness lower than that of the middle zone 4b. The core 4 is joined to inner surfaces of the topsheet 2 and the leak-barrier sheet 17 with the tissue paper therebetween.

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Please amend the paragraph on page 16, beginning at line 19 as follows:

In the diaper 1A as well as in the diaper 1B as have been illustrated and described above, the core 4 has a stiffness higher in its front and rear zones 4a, 4c than in its middle zone 4b, so it is not likely that the contraction of the first and second elastic members 9, 10 might be obstructed by the front and rear end zones 4a, 4c of the core 4. In both diapers 1A, 1B, the front and rear end zones 4a, 4c of the core 4 are tightly pressed against the wearer's skin as the middle portions 9b, 10b contract.

Please amend the paragraph on page 17, beginning at line 5 as follows:

In both diapers 1A, 1B when put on the wearer, the both side portions 9a, 10a of the first and second elastic members 9, 10, respectively, cooperate with the third elastic members 11 to surround the wearer's thighs thereby to seal the full circumferences of the respective thighs of the wearer. In this way, leakage of excretion possibly occurring in the crotch region 21 is reliably avoided although the middle portions 9b, 10b of the first and second elastic members 9, 10 are spaced apart from each other in the longitudinal direction.

Please amend the paragraph on page 17, beginning at line 15 as follows:

In these ~~diaper~~ diapers 1A, 1B, the tensile stress of the both side portions 9a, 10a of the first and second elastic members 9, 10 preferably is greater than that of the middle portions 9b, 10b of the first and second elastic members 9, 10. With the diapers 1A, 1B in which those portions 9a, 10a, 9b, 10b present the tensile stress as represented by the above-described relationship, the contractile force of the both side portions 9a, 10a can sufficiently seal the circumferences of the wearer's thighs and there is no possibility that the front and rear end zones 4a, 4c of the core 4 might be formed with a plurality of gathers even when the middle portions 9b, 10b contract.

Please amend the paragraph on page 18, beginning at line 7 as follows:

The backsheet 3 may be formed of materials other than ~~not only with~~ of the composite sheet

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composed of the hydrophobic fibrous nonwoven fabric 3a and the plastic film 3b joined to the hydrophobic fibrous nonwoven fabric 3a. In addition to such composite sheet, the stock material selected from a group including a hydrophobic fibrous nonwoven fabric, a liquid-impervious plastic film and laminated two layers of a hydrophobic fibrous nonwoven fabric may be used. It is also possible to form the backsheet 3 of a composite nonwoven fabric composed of a melt blown fibrous nonwoven fabric having high water-resistance and two layers of a spun bond fibrous nonwoven fabric having high strength and flexibility.

Please amend the paragraph on page 18, beginning at line 19 as follows:

The nonwoven fabric may be selected from a group including spun lace-, needle punch-, melt blown-, thermal bond-, spun bond-, chemical bond- and air through-nonwoven fabrics. The component fiber of the nonwoven fabric may be selected from a group including ~~polyolefine~~ polyolefin, polyester and polyamide fibers, and polyethylene/polypropylene or polyethylene/polyester core-sheath-type or side-by-side type conjugated fibers.

Please amend the paragraph on page 19, beginning at line 11 as follows:

Bonding of the top- and backsheets 2, 3 to each other, fixing of the leak-barrier sheet 17 to the backsheet 3, joining of the core 4 to the top- and backsheets 2, 3, and attachment of the elastic members 9, 10, 11, 12, 13 may be carried out using hot melt adhesive or heat welding technique such as heat-sealing or sonic sealing.

Please amend the paragraph on page 20, beginning at line 2 as follows:

In the case of the undergarment according to the preferred embodiment of this invention in which the core has a stiffness lower in its front and rear zones than in its middle zone, the middle portions of the first and second elastic members can properly contract without being affected by the front and rear zones of the core. Therefore, the contraction of the middle portions of these elastic members can be effectively used to maintain the front and rear zones of the core in close contact

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with the wearer's skin.

Please amend the paragraph on page 20, beginning at line 12 as follows:

In the case of the undergarment according to the other preferred embodiment of this invention in which the third elastic members extend between the middle portions of the first and second elastic member, respectively, ~~[[the]]~~ both side portions of the first and second elastic members cooperate with the third elastic members to surround the wearer's thighs and thereby ~~[[to]]~~ seal the full circumferences of the wearer's thighs. Such a unique arrangement ensures that possible leakage of excretion ~~possibly~~ occurring in the crotch region can be reliably avoided although the middle portions of the first and second elastic members are spaced from each other in the longitudinal direction of the diaper.

Abstract:

Please replace the current Abstract with the following replacement/new Abstract